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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,231	09/24/2003	Akira Kikitsu	243213US2SRD	2055

22850 7590 04/05/2006

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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RICKMAN, HOLLY C

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/668,231

Applicant(s)

KIKITSU ET AL.

Examiner

Holly Rickman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-14 is/are allowed.
- 6) ☒ Claim(s) 1,3-6,15,17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-6, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Uwazumi et al. (US 6770388).

Uwazumi et al. disclose a magnetic recording medium having a soft magnetic layer, a non-magnetic layer formed from Ti, and a perpendicular magnetic recording layer disposed on a substrate (col. 6, lines 49-66). The reference teaches that the thickness of the Ti layer (non-magnetic layer) is 10 nm. As shown in Figure 1, the soft magnetic layer has three portions: an upper portion corresponding to the claimed “soft magnetic dots” of claim 1 and the “arrayed projections” of claim 15, a lower portion corresponding to the claimed “soft magnetic underlayer” and a vertical connecting portion joining the two. With respect to claim 3, the examiner directs applicant’s attention to Figure 1 showing that the lower portions of the non-magnetic layer are “embedded” between adjacent soft magnetic “dots.”

3. Claims 1, 3-6, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Kikitsu et al. (US 6602620).

Kikitsu et al. disclose a magnetic recording medium having a soft magnetic layer, a non-magnetic layer, and a perpendicular magnetic recording layer disposed on a substrate (see Fig 6; col. 13, line 23 to col. 14, line 50). The reference teaches that the thickness of the soft magnetic layer is a minimum of 10 nm. As shown in Figure 1, the soft magnetic layer has two portions: an upper portion corresponding to the claimed “soft magnetic dots” of claim 1 and the “arrayed projections” of claim 15 and a lower portion corresponding to the claimed “soft magnetic underlayer” wherein the two portions are in direct contact. With respect to claim 3, the examiner directs applicant’s attention to Figure 1 showing that the lower portions of the non-magnetic elements (figure no. 36) are “embedded” between adjacent soft magnetic “dots.”

#### ***Allowable Subject Matter***

4. Claims 7-14 are allowable over the prior art which fails to teach the claimed structures having soft magnetic dots formed on the perpendicular magnetic recording layer (directly or via a non-magnetic layer).

#### ***Response to Arguments***

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5. Applicant's arguments filed 1/4/06 have been fully considered but they are not persuasive.

Applicant argues that neither Uwazumi et al. nor Kikitsu et al. disclose the structures of claims 1 and 15 which have now been amended to include the limitations of claims 2 and 16, respectively. However, dependent claims 2 and 16 were previously rejected in view of the

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aforementioned references. Applicant provides no explanation as to why the structure described in Kikitsu et al. does not meet the limitations of the claims. Thus, this rejection has been maintained.

Applicant argues that Uwazumi et al. don't disclose the claimed layered structure of a soft magnetic underlayer and arrayed soft magnetic dots. The examiner maintains that the structure taught by Uwazumi et al. meets the limitations of the claims. The structure taught by Uwazumi et al. discloses a soft magnetic layer having three strata corresponding to the claimed soft magnetic underlayer and arrayed soft magnetic dots. Applicant has not provided any arguments as to why the structure taught by Uwazumi et al. does not correspond to the claimed structure. As such, this rejection has also been maintained.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Holly Rickman", with a stylized, cursive script.

Holly Rickman  
Primary Examiner  
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